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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,629	07/01/2005	Johan Loccufier	234915	8183
23460	7590	11/19/2007		
LEYDIG VOIT & MAYER, LTD TWO PRUDENTIAL PLAZA, SUITE 4900 180 NORTH STETSON AVENUE CHICAGO, IL 60601-6731			EXAMINER EOFF, ANCA	
			ART UNIT	PAPER NUMBER
			1795	
			MAIL DATE	DELIVERY MODE
			11/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/531,629

**Applicant(s)**

LOCCUFIER ET AL.

**Examiner**

Anca Eoff

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,7-11,13,19,24 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-11,13,19,24 and 35-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 06/24/2005, 10/07/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The foreign priority document EPO 02102445.0 filed on October 15, 2002 was received and acknowledged.

#### ***Election/Restriction***

2. In response to the election requirement set forth in the previous Office Action, the application has elected Species E1-p, claims 1, 7-11, 13, 19, 24 and 35-37. Claims 2-6, 12, 14-18, 20-23 and 25-34 have been withdrawn.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraph of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

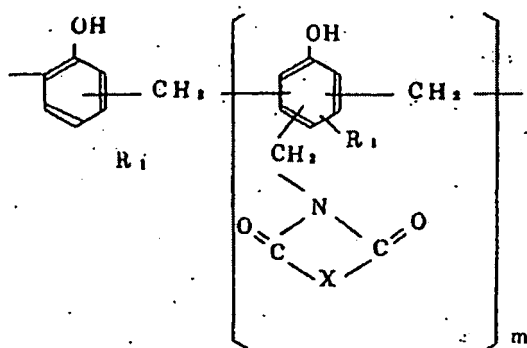
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

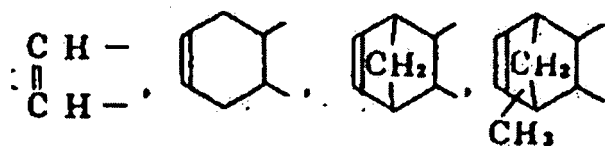
4. Claims 1, 7 -8 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishikawa (JP 59-157109).

With regard to claim 1, Nishikawa discloses a resin comprising a phenolic monomeric unit, wherein the phenyl group has a substituent comprising an imide group.

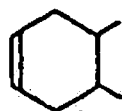
The resin is represented by the formula (I):

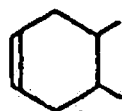


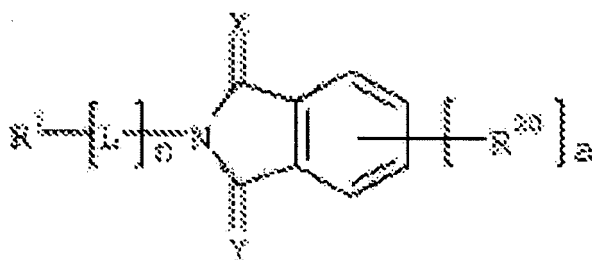
(I) (compound of formula (II) in the abstract), where the group X in the imide is



(claims, summary of the invention).



When the group X has the formula , the resin of formula (I) meets the limitation of claim 7, the resin (I) being equivalent to the phenolic resin having a substituent of the formula:

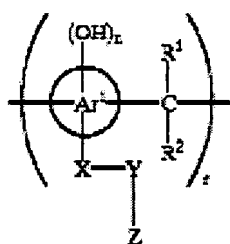


where  $R_1$  is the phenolic monomeric unit, L is a  $-CH_2-$  linking group, X and Y are oxygen atoms, the substituents  $R^{20}$  are all hydrogen atoms and  $a=4$ .

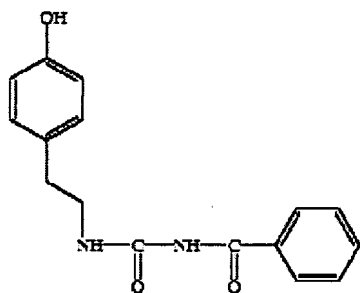
With regard to claims 8 and 35, Nishikawa further discloses that the resin is a novolac-type resin (abstract, table 1)

5. Claims 1, 8-9 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by Kunita (EP 0 982 123).

With regard to claim 1, Kunita discloses an image recording material or photosensitive composition comprising (A-1) a phenolic polymer having a structural unit represented by the formula (II) on a polymer backbone:

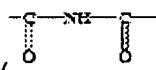


(II) (formula I-(1) in par.0009), wherein  $Ar^1$ ,  $R^1$ ,  $R^2$ ,  $X$ ,  $Y$  and  $Z$  are defined in par.0009. A specific example of compound represented by the formula (II) is the compound of formula (III):



(III) (compound (S-1) in par.0041)

This monomer meets the limitation of claim 1 for a phenolic monomer having a

substituent which comprises an imide group (  ) in its structure.

With regard to claim 8, Kunita further discloses that the phenolic polymer is a novolak-type polymer having on a main and/or side chain a structural unit derived from a phenolic structure having a specific -X-Y-Z functional group (par.0022).

With regard to claim 9, Kunita further discloses that the image recording material or photosensitive composition are recorded using an infrared laser. Therefore, it is preferable that the recording material or composition contains an infrared ray absorbing agent (par.0125).

The image recording material is applied on a substrate (par.0170), such as an aluminum plate (par.0175). The aluminum plate may be anodized in order to enhance the water retention and wear resistance of the surface (par.0178). The aluminum plate which has been anodized may be optionally subjected to a hydrophilization treatment (par.0180). The aluminum plate substrate treated as shown above is equivalent to the support having a hydrophilic surface of the instant application.

The image recording material is applied on a substrate (par.0170) and the recording can be performed using an infrared laser (par.0185) then a developing treatment is performed immediately after exposure (par.0186).

Kunita does not clearly disclose that the image recording material constitutes the oleophilic coating of the printing plate but it is well-known in the art that, in general, a lithographic printing plate comprises an oleophilic image area capable of accepting ink

in the process of printing and a hydrophilic non-image area capable of accepting a fountain solution. As a precursor for such a lithographic printing plate, a plate having an oleophilic photosensitive layer (ink-receptive layer) on a hydrophilic substrate has been used (Yanaka et al., US Pg-Pub 2001/0046638, par.0002).

For the printing plate of Kunita, the image recording layer constitutes the oleophilic layer and the hydrophilized aluminum plate constitutes the hydrophilic support.

With regard to claims 13 and 37, Kunita further discloses that the image recording material or the photosensitive composition can be of a negative type so compounds cross-linkable in the presence of an acid can be used (par.0156). A compound which generates an acid in the presence of heat (acid-generating agent), equivalent to the latent Bronsted acid of the instant application, can also be incorporated in the image recording material (par.0158).

The image recording material is applied on a substrate (par.0170) to form a planographic printing plate precursor.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10-11 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunita (EP 0 982 123) in view of Urano et al. (US Pg-Pub 2002/0058207).

With regard to claims 9 and 10, Kunita discloses a printing plate comprising a hydrophilic aluminum support and a coating comprising the phenolic polymer of formula (III ) and an ray absorbing agent (see paragraph 5 of the Office Action) but fails to disclose that the coating/image recording layer comprises a dissolution inhibitor.

Urano et al. disclose a positive photosensitive composition comprising a novolak resin as essential component (par.0039), photo-thermal conversion material (equivalent to the infrared ray absorbing agent of Kunita) (par.0022). The composition may contain a solubility-suppressing agent which has a function of lowering the solubility of the novolak resin, for the purpose of increasing the difference in the solubility in the alkali developer between the exposed portion and the non-exposed portion. Such a solubility-suppressant agent is considered to lower the solubility of the novolak resin in the alkali developer by forming hydrogen bond with the novolak resin (par.0048).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to add the solubility-suppressing agent (dissolution inhibitor) of Urano et al. in the image recording material composition of Kunita, in order to of increasing the difference in the solubility in the alkali developer as between the exposed portion and the non-exposed portion of the novolak-type resin (Urano et al., par.0048).

With regard to claim 11, Urano et al. further disclose that the solubility-suppressing agent can be an aromatic amine, equivalent to the organic compound comprising an aromatic group and a hydrogen bonding site of the instant application,



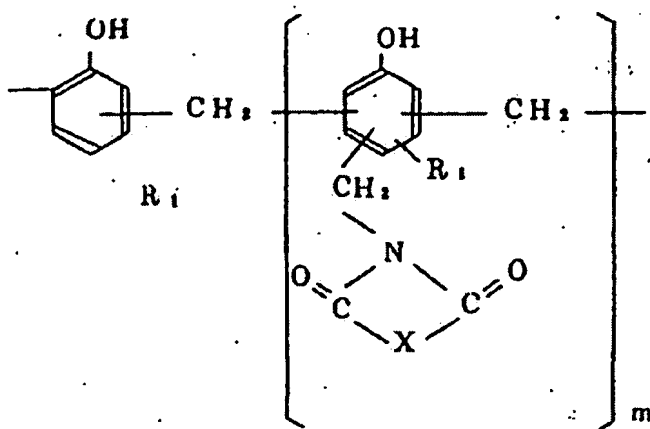
since page 32 of the specification of the instant application shows that a hydrogen bonding site can be a nitrogen atom which is part of an amino substituent.

With regard to claim 36, Kunita further discloses the image recording material is applied on a substrate (par.0170) to form a planographic printing plate precursor.

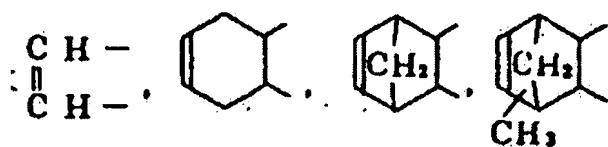
8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kunita (EP 0 982 123) in view of Nishikawa (JP 59-157109).

With regard to claims 9 and 19, Kunita discloses a printing plate comprising a hydrophilic aluminum support and a coating comprising a polymer and an ray absorbing agent, said polymer having a phenolic monomer with a substituent which comprises an imide group (see paragraph 5 of the Office Action). However, Kunita fails to disclose a phenolic monomer with a substituent comprising an imide group as represented by one of the formulas in claim 19 of the instant application.

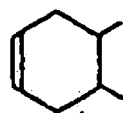
Nishikawa discloses a resin with excellent curing properties (abstract). The resin comprises a phenolic monomeric unit, wherein the phenyl group has a substituent comprising an imide group. The resin is represented by the formula (I):

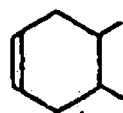


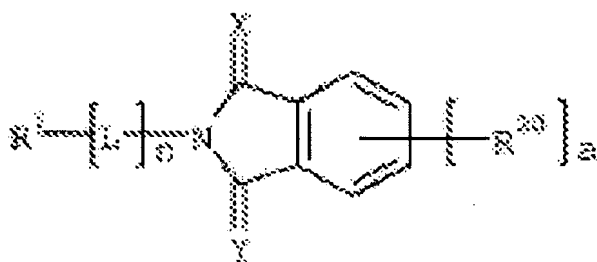
(I) (compound of formula (II) in the abstract), where the group X in the imide is



(claims, summary of the invention).



When the group X has the formula , the resin of formula (I) meets the limitation of claim 19, the resin (I) being equivalent to the phenolic resin having a substituent of the formula:



where  $R_1$  is the phenolic monomeric unit, L is a  $-CH_2-$  linking group, X and Y are oxygen atoms and the substituents  $R^{20}$  are all hydrogen atoms and  $a=4$ .

The resin of Nishikawa shows good heat resistance, heat shock resistance and preserves the bending strength (see table 2).

Since Kunita discloses the use of phenol resins with imide-group containing substituents for a planographic printing plate and the phenolic resin of Nishikawa shows good properties, it would have been obvious for one of ordinary skill in the art at the time of the invention to use the resin of Nishikawa for the composition of planographic printing plate precursor of Kunita, with a reasonable expectation of success.

9. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kunita (EP 0 982 123) in view of Nishikawa (JP 59-157109) as applied to claim 19 above and in further view of Urano et al. (US Pg-Pub 2002/0058207).

With regard to claims 19 and 24, modified Kunita disclose the printing plate precursor composition as applied to claim 19 but Kunita and Nishikawa fail to disclose that the composition comprises a dissolution inhibitor.

Urano et al. disclose a positive photosensitive composition comprising a novolak resin as essential component (par.0039), photo-thermal conversion material (equivalent to the infrared ray absorbing agent of Kunita) (par.0022). The composition may contain a solubility-suppressing agent which has a function of lowering the solubility of the novolak resin, for the purpose of increasing the difference in the solubility in the alkali developer as between the exposed portion and the non-exposed portion. Such a solubility-suppressant agent is considered to lower the solubility of the novolak resin in the alkali developer by forming hydrogen bond with the novolak resin (par.0048).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to add the solubility-suppressing agent (dissolution inhibitor) of Urano et al. in the image recording material composition of modified Kunita, in order to of increasing the difference in the solubility in the alkali developer as between the exposed portion and the non-exposed portion of the novolak-type resin (Urano et al., par.0048).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anca Eoff whose telephone number is 571-272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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AE *JE*

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*Guthrie A. Keel*